

## Turkey Creek near Wilber, Nebraska 06881200

### LOCATION

#### *Latitude and Longitude*

40.48017, -97.01259

#### *Road Log*

Located near the left downstream end of the bridge on State Highway 41, 2.8 miles west of Wilber.

#### *Nearby Features*

### Equipment Details

#### *Recording Gage*

OTT Radar Level Sensor connected to a Sutron Satlink 3 that records stage data every 15 minutes and transmits digital data every 60 minutes. The equipment is housed in a 24" X 30" stainless steel shelter on a steel platform and piling located on the left downstream wing wall. The OTT Radar Level Sensor is connected to the bridge rail near the wire weight gage over the channel.

#### *External Gage*

Outside gage is a Type A wire-weight gage mounted on the downstream side of bridge. Elevation of check bar is 25.06 feet (gage datum - Levels 04/12/2021).

#### *Bench Mark and Reference Marks*

**R.M.** Nos. **1, 2,** and **4** are at the old station site one-fourth mile downstream.

**R.M.** Nos. **5, 6, 7, 8,** and **R.P.** No. **1** have been destroyed.

**BM#1** is a brass tablet set in the top of the concrete handrail left downstream end of bridge. Set by State of Nebraska Department of Roads with a stamped elevation of 1,348.674 mean sea levels was found by the Survey on 03/25/2014 to be 1,348.875 feet NAVD88, 26.67 feet gage datum. LEVELS 04/12/2021.

**R.M. No. 9** is a chiseled square in the top and extreme end of wing wall on the left upstream end of bridge, 23.93 feet gage datum. LEVELS 04/12/2021.

**R.M. No. 10** is a chiseled square on a concrete ledge below the right upstream abutment below the concrete handrail, 20.07 feet gage datum. LEVELS 04/12/2021.

**R.P. No. 2** is a chiseled arrow in the cambered edge of the downstream guardrail 100 feet west of an open joint at the east end of the bridge rail, 26.24 feet gage datum. LEVELS 04/12/2021.

**Wire weight** is located 100 feet west of the left downstream end of the bridge, 25.06 feet gage datum. LEVELS 04/12/2021.

**Datum** of gage is 1,322.205 feet above mean sea level. Datum was determined by NAVD88 Survey 03/25/2014 to the Nebraska Department of Roads BM#1 marked 1,348.674 feet.

## Hydrology

### *Drainage Area*

460 square miles.

### *Channel and Control*

The channel through the gage reach straightened by dredging and levees for uniform flow through the bridge at all stages. Original channels above and below the improved sections meander through the wooded flood plain with low banks covered with underbrush and weeds.

### *Discharge Measurements*

At low stages, wading measurements made nearby the bridge. If beaver activity is in the area low measurements then made at next bridge downstream. High-water measurements generally from the downstream side of the highway bridge.

### *Floods*

### *Extremes for Period of Record*

1960-1988. Maximum discharge 33,000 cubic feet per second June 13, 1984 (gage height, 21.45 feet), minimum daily 0 cubic feet per second September 20, 21, 24, 1976.

### *Point of Zero Flow*

Varies with scour and fill. The PZF was determined to be 1.27 feet on September 21<sup>st</sup>, 2016.

### *Winter Flow*

Stage-discharge affected by ice from November to March.

### *Regulation and Diversions*

Considerable pump withdrawal above and below station for irrigation during summer months.

### *Accuracy*

Records considered fair except those for winter period, which are poor.

## Establishment and History

Established October 1, 1959 by the Lincoln District of the U.S. Geological Survey. For about four months prior to this, the U.S. Weather Bureau had an observer taking high-water readings at a point nearby.

October 1, 1959 to July 10, 1970, water-stage recorder at site 0.2 mile downstream at same datum.

July 10, 1970, gage moved to present site at same datum.

October 4, 1994, operation turned over to DWR.

On May 25, 2005 the Handar equipment was removed and new WaterLog recording equipment was installed.

On April 14, 2006 a tipping rain bucket gage was added to the system.

On October 31, 2007 a transducer and self-contained air pump was installed after the Stevens A-71 water-stage recorder (scale 1:6) and a WaterLog shaft encoder together with Fluid Data G-2 Manometer with gas safe-purge system was removed.

On June 24, 2022 an OTT Radar Level Sensor and Sutron Satlink 3 was installed, replacing a WaterLog and bubbler.

On October 19, 2022 we replaced the existing gage house with a 24" X 30" stainless steel shelter.



## Revision History

Description prepared 3-17-1960 by J. F. Ficke

Revised 9-23-1966 by E. K. Steele

Revised 1-14-1970 by J. A. Anderson

Revised 10-3-1989 by J. A. Marburger

Revised 1-20-1993 by J. A. Marburger

Revised 2-14-1995 by J. A. Marburger

Revised 6-14-1996 by J. A. Marburger

Revised 7-30-1997 by J. A. Marburger

Revised 12-14-1999 by J. A. Marburger

Revised 12-15-2000 by J. A. Marburger

Revised 01-07-2005 by J. A. Marburger

Revised 06-17-2005 by J. A. Marburger

Revised 11-06-2006 by J. A. Marburger

Revised 06-28-2007 by J. A. Marburger

Revised 01-12-2009 by J. A. Marburger

Revised 09-30-2011 by J. A. Marburger

Revised 08/04/2015 by J. A. Marburger

Revised 10/16/2019 by J. J. Vifquain

Revised 07/15/2022 by L. L. Geyer

Revised 10/25/2022 by J. Hladik